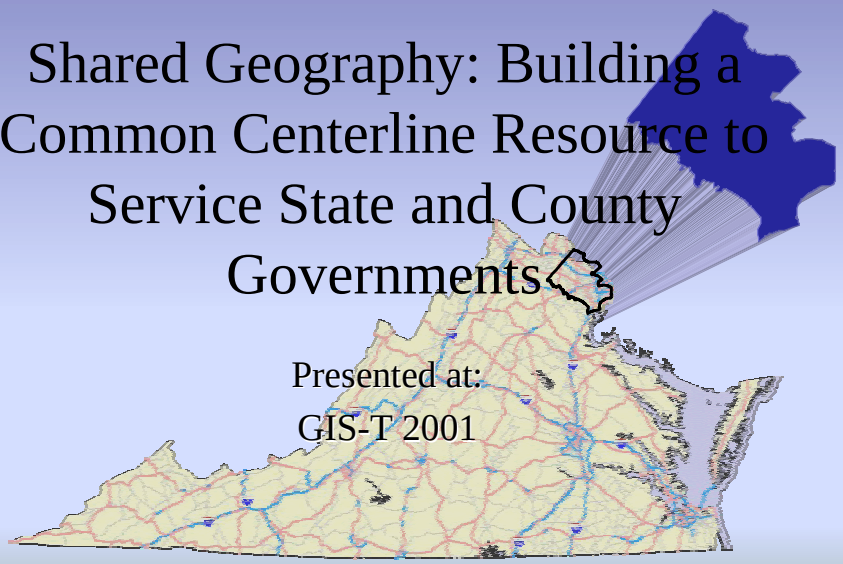
Shared Geography: Building a Common Centerline Resource to Service State and County Governments



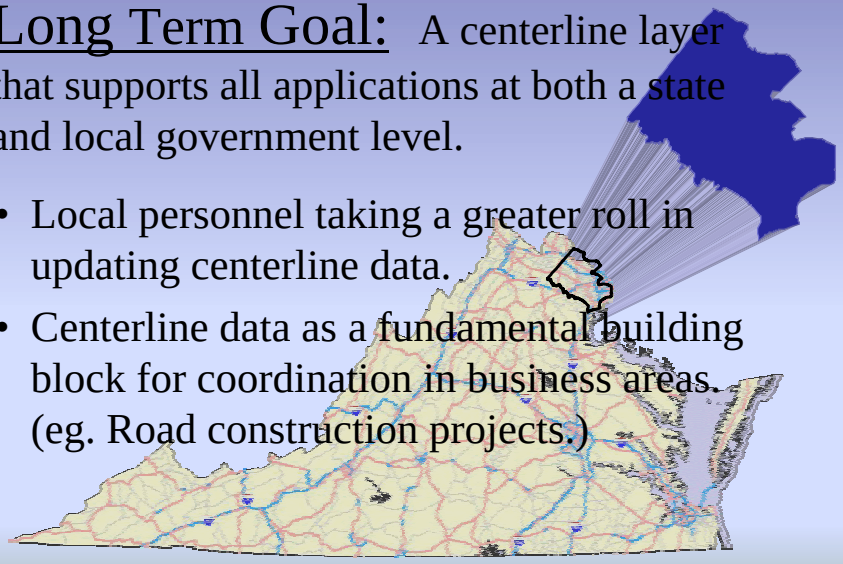
Presented at:

GIS-T 2001

Long Term Goal:

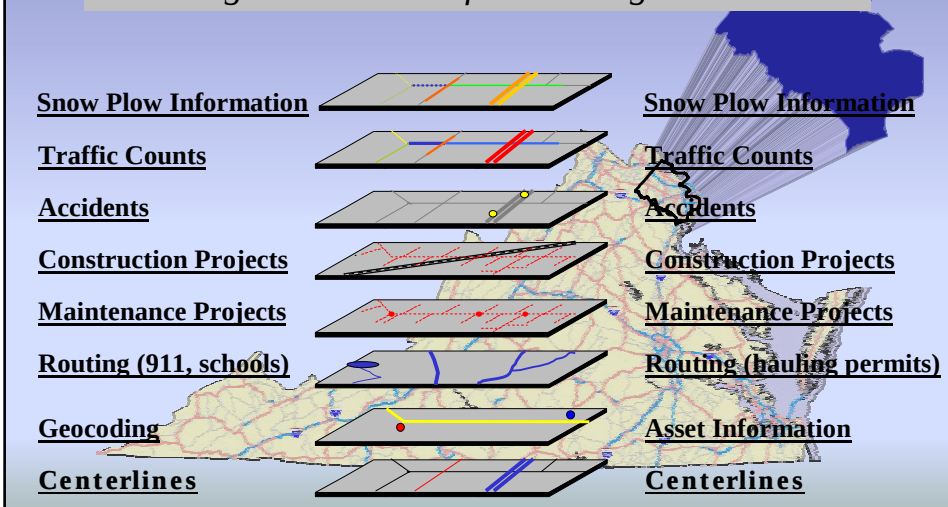
A centerline layer that supports all applications at both a state and local government level.

- Local personnel taking a greater roll in updating centerline data.
- Centerline data as a fundamental building block for coordination in business areas. (eg. Road construction projects.)

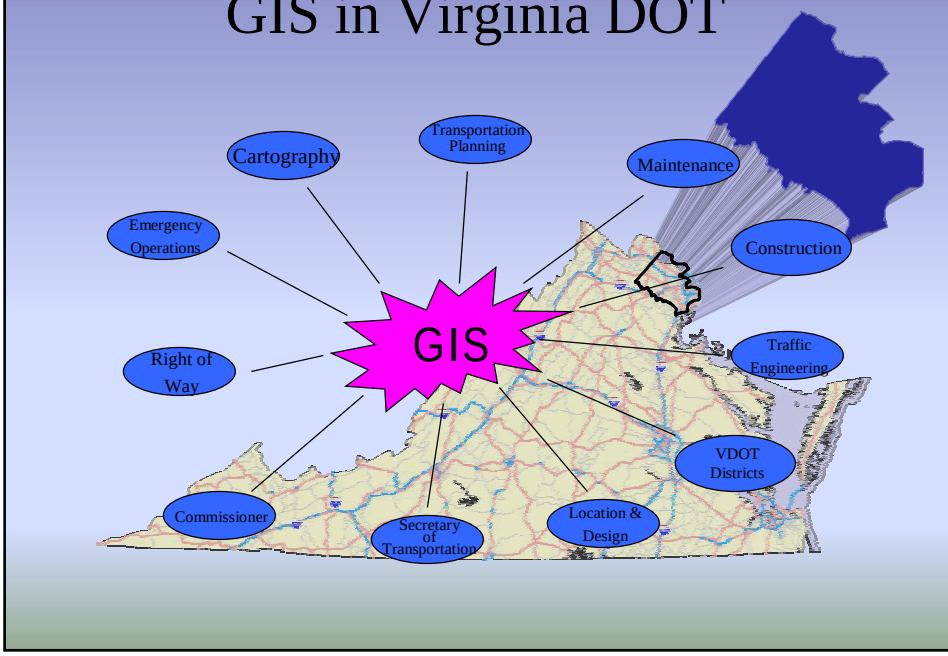


Shared Geography

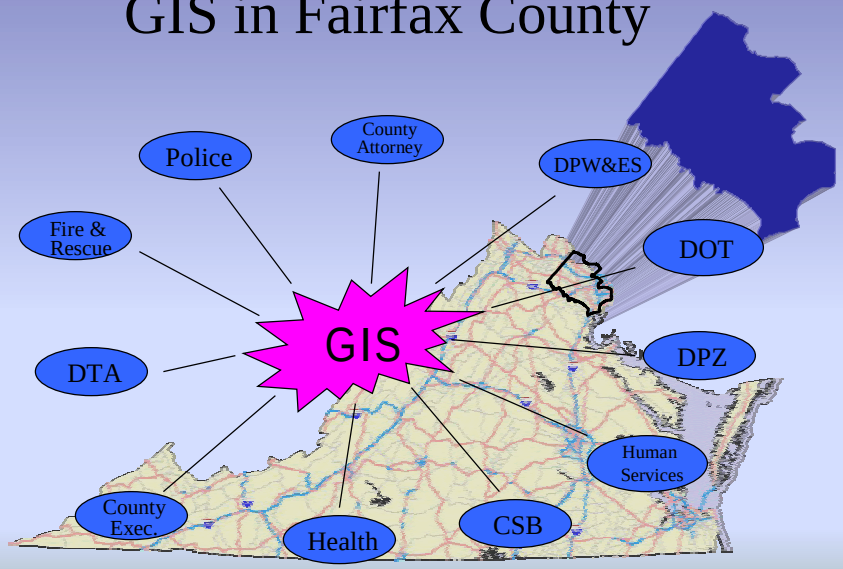
Providing the GIS Basis for enabling business data



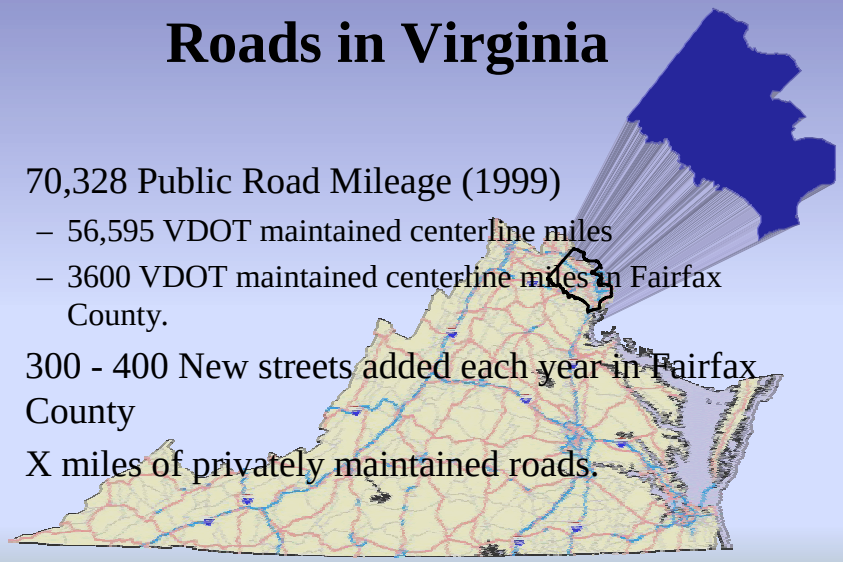
GIS in Virginia DOT



GIS in Fairfax County



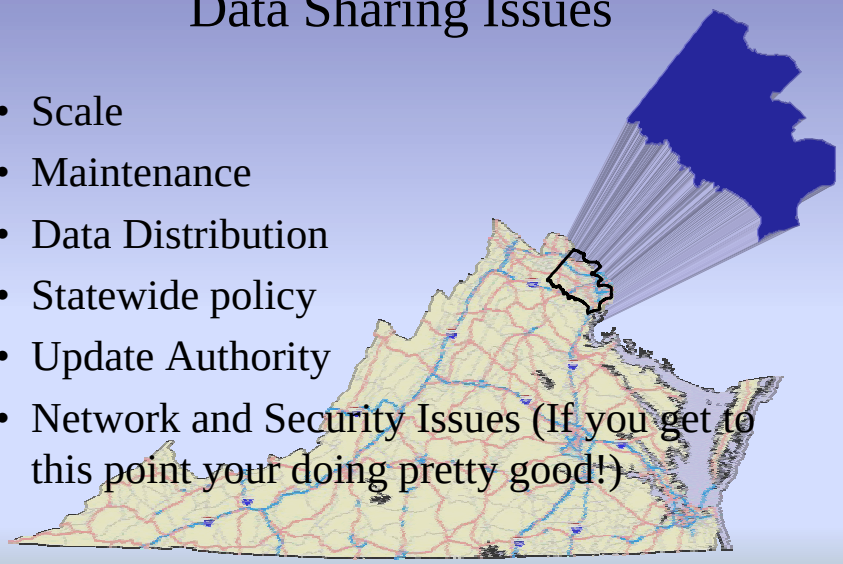
Roads in Virginia



- 70,328 Public Road Mileage (1999)
  - 56,595 VDOT maintained centerline miles
  - 3600 VDOT maintained centerline miles in Fairfax County.
- 300 - 400 New streets added each year in Fairfax County
- X miles of privately maintained roads.

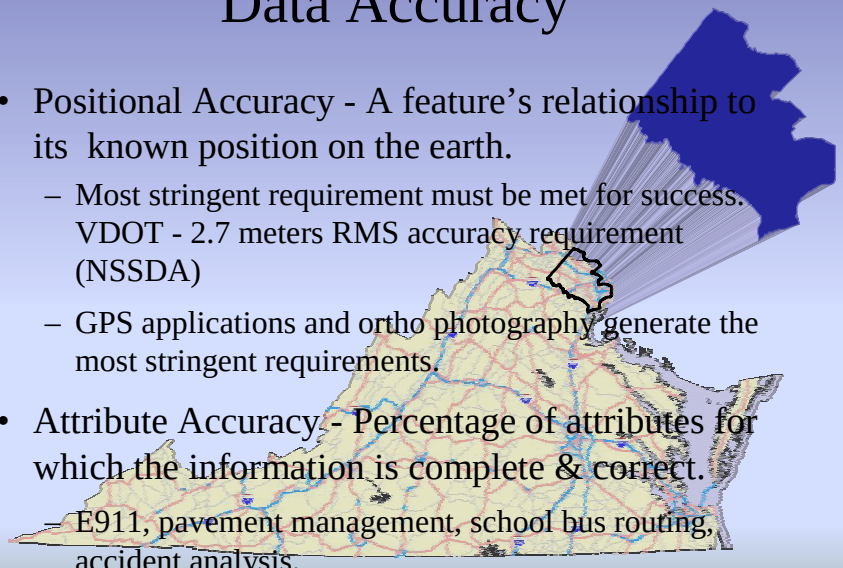
Data Sharing Issues

- Scale
- Maintenance
- Data Distribution
- Statewide policy
- Update Authority
- Network and Security Issues (If you get to this point your doing pretty good!)



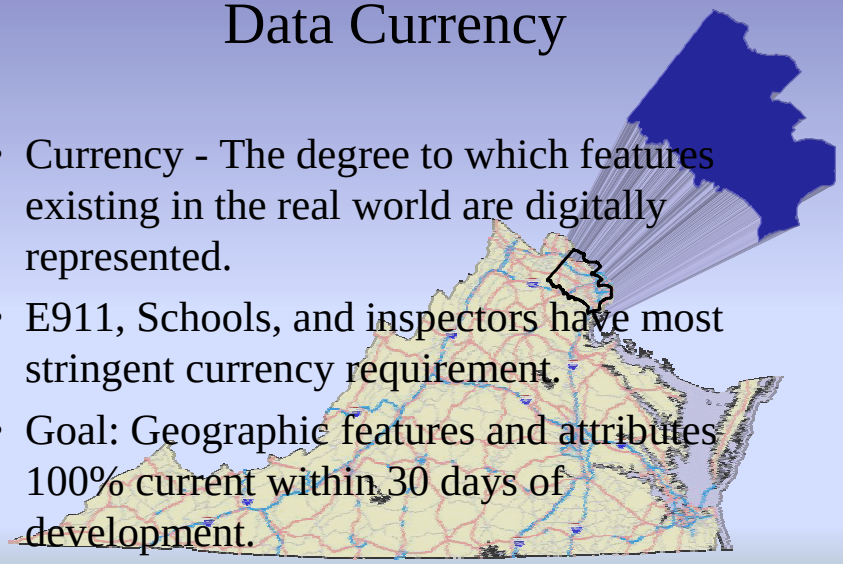
Data Accuracy

- Positional Accuracy - A feature's relationship to its known position on the earth.
  - Most stringent requirement must be met for success. VDOT - 2.7 meters RMS accuracy requirement (NSSDA)
  - GPS applications and ortho photography generate the most stringent requirements.
- Attribute Accuracy - Percentage of attributes for which the information is complete & correct.
  - E911, pavement management, school bus routing, accident analysis.



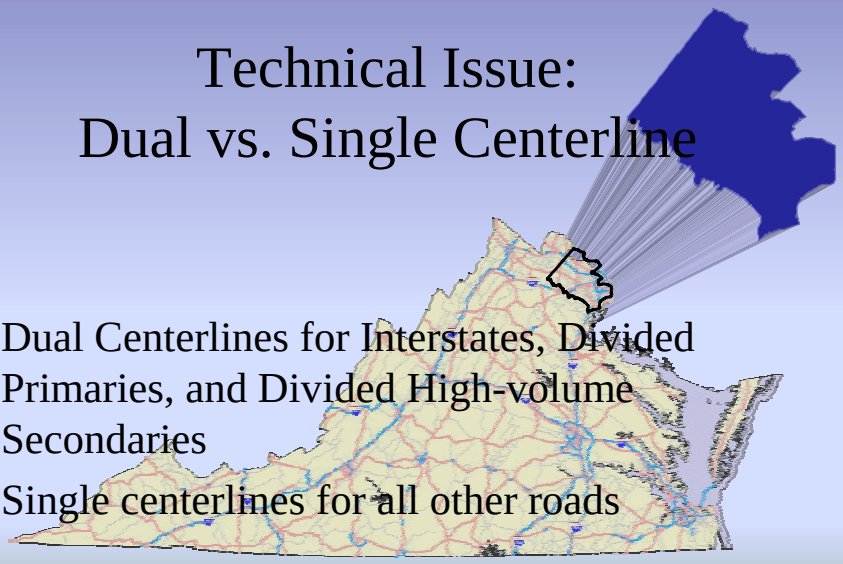
Data Currency

- Currency - The degree to which features existing in the real world are digitally represented.
- E911, Schools, and inspectors have most stringent currency requirement.
- Goal: Geographic features and attributes 100% current within 30 days of development.



Technical Issue: Dual vs. Single Centerline

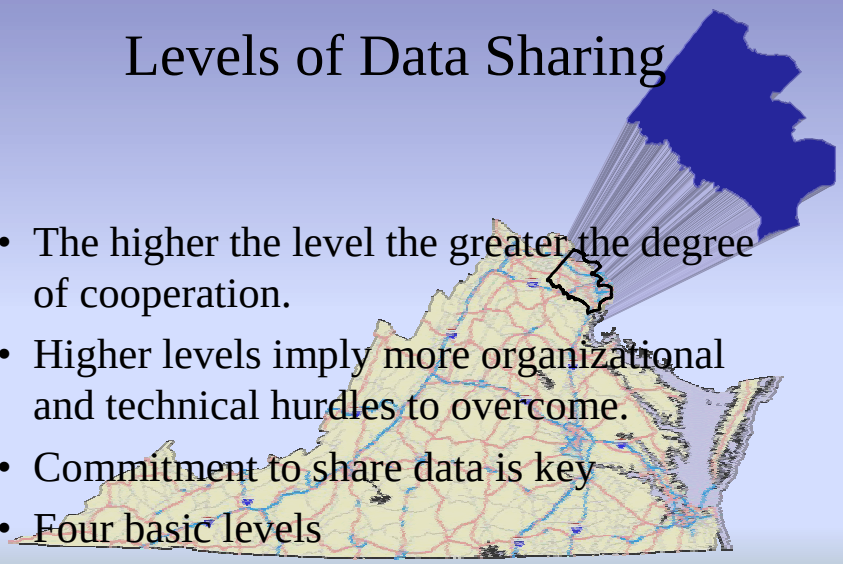
- Dual Centerlines for Interstates, Divided Primaries, and Divided High-volume Secondaries
- Single centerlines for all other roads



Dual vs. Single Centerline

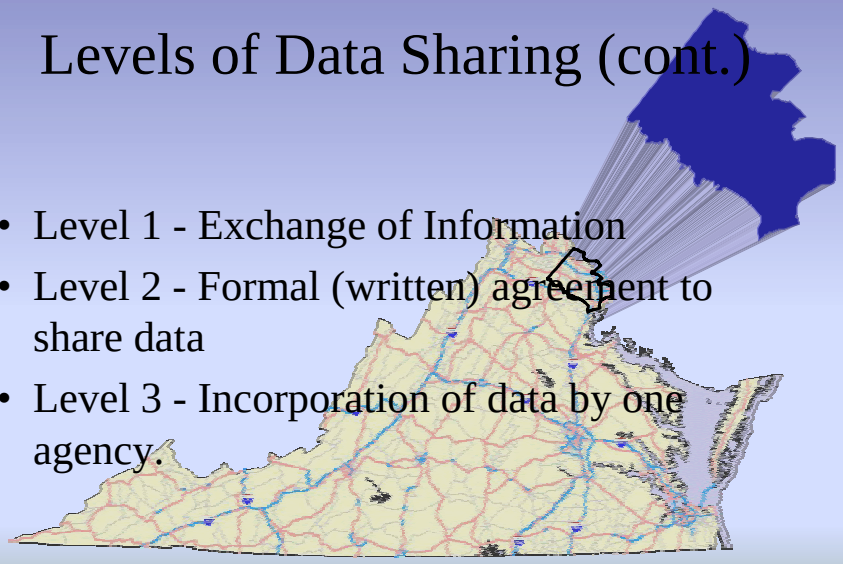
Dual Centerline Placement

Levels of Data Sharing



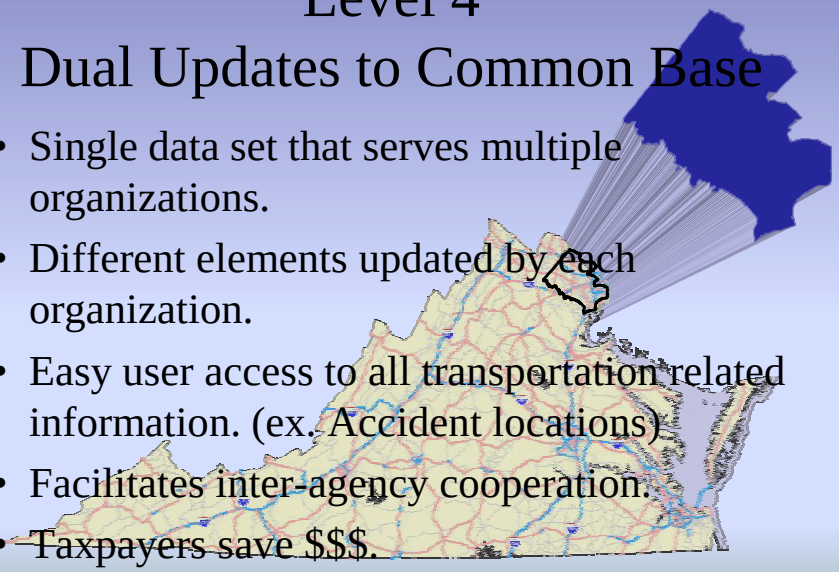
- The higher the level the greater the degree of cooperation.
- Higher levels imply more organizational and technical hurdles to overcome.
- Commitment to share data is key
- Four basic levels

Levels of Data Sharing (cont.)

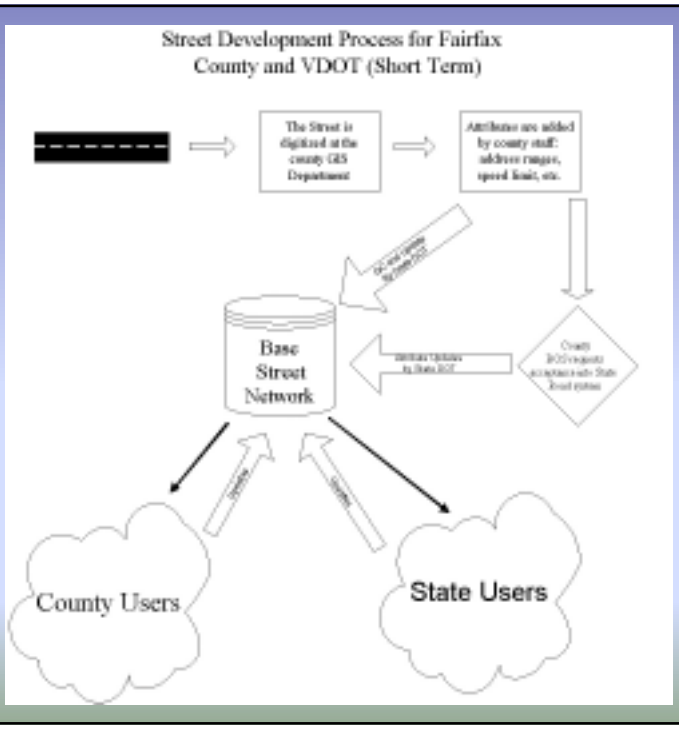


- Level 1 - Exchange of Information
- Level 2 - Formal (written) agreement to share data
- Level 3 - Incorporation of data by one agency.

Level 4
Dual Updates to Common Base



- Single data set that serves multiple organizations.
- Different elements updated by each organization.
- Easy user access to all transportation related information. (ex. Accident locations)
- Facilitates inter-agency cooperation.
- Taxpayers save $$$.



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